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ABSTRACT

A summary is presented of a study addressing three major questions concerning student mediation of teacher expectancy effects upon the performance and self-concept of elementary school students. These questions were: (1) Are there developmental differences in children's capacity to perceive differential treatment (toward others as well as themselves) and to apply communicated information about ability to themselves? (2) How do classrooms identified by children as exemplifying a great deal versus very little differential teacher treatments differ from each other in terms of teachers' and students' perceptions of student ability and expectations for performance, structural and interactional features of classroom processes, student achievement outcomes, and parental beliefs about achievement and expectations; and (3) Does initial student self-concept influence student susceptibility in how they perceive teacher treatement and how they respond to teacher expectancy clues? An overview is presented of the methods used in the study and findings are briefly analyzed. (JD)

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EXECUTIVE SUMMARY

For

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ECOLOGY OF STUDENTS' ACHIEVEMENT EXPECTATIONS

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EXECUTIVE SUMMARY

Research on the self-fulfilling prophecy in classroom settings has distinguished between direct and indirect effects of teacher expectations on student performance. Differential teacher treatment (e.g. unequal time to practice material) can directly affect student achievement gains without involving student interpretive processes. Teacher expectations can also influence student performance indirectly by informing students about expected behavior and by affecting their self-concept and motivation. Thus, performance deterioration can occur with (student mediated), or without the erosion of student self-image and motivation.

This project addressed three major overarching questions concerning student mediation of teacher expectancy effects in elementary school classrooms -- questions that have not yet been addressed in the research literature. We asked: (1) are there developmental differences in children's capacity to perceive differential treatment (toward others as well as toward the self) and to apply communicated information about ability to themselves? (2) How do classrooms identified by children as exemplifying a great deal versus very little differential teacher treatment differ from each other in terms of teachers' and students' perceptions of student ability and expectations for performance, structural and interactional features of classroom processes, student achievement outcomes, and parental beliefs about achievement and expectations? (3) Does initial student self-concept influence student susceptibility in how students perceive teacher treatment and how they respond (in achievement outcomes) to teacher expectancy cues?

Prior to examining these research questions, three instrument development studies were conducted in order to adapt our instrument to measure student perception of differential teacher treatment for use with younger children (since this study focused on developmental or grade level comparisons) and to test its properties more extensively.

TEACHER TREATMENT INVENTORY (III) INSTRUMENT DEVELOPMENT STUDIES

Study Samples and Methods

Thirty students, 5 boys and 5 girls from two classes at grades one, three, and five served as subjects for a study (across grade levels) of student interpretation of the Teacher Treatment Inventory items. For each item, students were asked (1) to indicate if each behavior happened in their classroom, (2) to give an example from their classroom or from another classroom, and (3) to indicate if the teacher did the same thing or different things for students who were smart and students who were not so smart.

In a second "reliability" study involving 318 students from 26 classrooms at grades one (N = 87), three (N = 94) and five (N = 137), a revised Teacher Treatment Inventory was administered twice within a two week interval. Analyses included internal consistency of the three scales and analyses of differential treatment effects.

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A third study was conducted exploring the construct validity of the Teacher Treatment Inventory, using previously collected data (101 3rd-5th graders from 7 classrooms and 234 4th-6th graders from 16 classrooms). Information collected included teacher and student expectations, students' perceptions of teacher treatment toward high and low achievers and student achievement scores, both prior and year end.

The instrument development work that was conducted on the student perception measure (the Teacher Treatment Inventory) suggests that the revised 30 item three scale inventory (when read to students) is adequate for use with first grade through fifth grade students. Further, the test-retest reliability is also adequate over a two week period. Children at the different grade levels were found to interpret the items as intended although the frequencies as well as the context or purpose of certain teacher interactions varied by grade level. When students were asked directly whether high and low achievers received the same or different treatment on each teacher behavior variable, students at all grade levels were more likely to respond that the treatment was the same; whereas independently made judgments about teacher treatment of high and low achievers yields a picture of differential treatment. The difference in methodology may alleviate students' concerns about protecting the teacher.

Evidence for the construct validity of the Teacher Treatment Inventory was also provided in an analysis of previously collected data. In classrooms where students reported a great deal of differential treatment toward high and low achievers, teachers' expectations predicted more of the variance in students' own expectations and in students' achievement (after controlling for initial achievement differences) as compared to classrooms where students reported little differential treatment. This suggests that students in classrooms with perceived high differential treatment have access to more information about their teacher's expectation for them and incorporate this information into their own expectations as well as perform accordingly.

ECOLOGY OF ACHIEVEMENT EXPECTATIONS STUDY

Study Sample and Methods

We collected information from teachers (N=30), students (N = 579) and parents (N = 243) in 30 classrooms, 10 each at first, third, and fifth grade level, in twelve urban ethnically mixed schools in two school districts. In the Fall of 1981, we obtained students' entering achievement scores, teachers' and students' expectations for student performance, students' self-concept and students' perceptions of teacher treatment toward high and low achievers and toward self. A subset of four classrooms from each grade level (N = 12), selected on the basis of the fall student perception data to represent the extremes of perceived differential teacher treatment (a great deal versus very little) was observed in Winter of 1982 using a quantitative and qualitative observation system. In Spring of 1982, year-end achievement scores were recorded from school records and parent questionnaires (from mothers) were collected.

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I. Developmental Differences

Perceptions of differential treatment toward others. We tested whether students perceived differences in the teacher treatment of four types of hypothetical students (defined by gender and achievement level). The only documented effect of grade level is on the frequency of teacher behaviors reported not on the report of differential teacher treatment itself. In all grades studied, even with children as young as first graders, students described high achievers as receiving less negative feedback and teacher direction, less work and rule orientation and higher expectations, opportunity and choice than did low achievers. The gender of the rated student does not seem to be an important factor. Perceived differences in the treatment of high and low achievers appear in the ratings for both boys and girls.

We also found that regardless of grade level, individual students perceive more differential treatment (on a second 8 item measure) in class identified (on the basis of the three scale TTI) high versus low differential treatment classrooms. While younger children report less differential treatment overall, their ratings still demonstrate differences between these identified classrooms.

Perceptions of own treatment. We asked whether children who were the recipients of high and low expectations from the teacher perceived their own interactions with the teacher as more or less positive and whether these differences were accentuated in older students and in identified high differential treatment classrooms. Our results suggest that students for whom teachers held high expectations reported more positive treatment from the teacher than did those students for whom teacher held low expectations. However, during the fall of the school year, these differences in perceived treatment between high and low teacher-expectancy students were not any greater in high versus low differential treatment classrooms. Age, however, proved significant. Older students in general reported less positive teacher treatment than younger students and differences between high and low teacher-expectancy students in perceived treatment were greater among older than younger students (fifth compared to third grade students).

Perception of teacher expectations. We examined the relationship between students' perceptions of their teachers' expectations for them (as rank-ordered relative to thirty students in the class) and teachers' actual expectations for them in the fall of the school year. Students show no awareness of the specific level of teacher expectations in the early grades and some awareness by fifth grade. The type of classroom a child is in heightens student awareness only at the fifth grade level and only when the extremes of high and low differential treatment classes are compared in the subsample.

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II. Identified High and Low Differential Teacher Treatment Classrooms: Differences

Teacher Beliefs About Students

Characteristics of teacher expectations for students. Teachers in student identified high differential treatment classrooms hold more congruent expectations for their students across reading and math than do teachers in low differential treatment classrooms but these differences were found only at third and fifth grade levels. At all grades, however, teachers in high differential treatment classrooms are more influenced by prior reading scores in developing their expectations for students in both math as well as reading. These findings suggest that teachers of students identified high differential treatment classrooms have more generalized and narrowly derived notions of student ability than do teachers of low differential treatment classrooms.

Observed Practices

Classroom structural differences. Hypothesized structural differences between the identified classrooms were not largely supported. Use of student choice, divergent tasks, concurrently different tasks and neutral labels for groups were all higher in perceived high differential treatment classrooms compared to low differential treatment classrooms. Flexible and heterogeneous grouping and the proportionate use of whole class versus group structure proved to be more variable by grade and by type of classroom.

Whole-class interactional differences. Low differential treatment classrooms at the fifth grade level as identified by students were observed to have more positive teaching behaviors toward students in general. Teachers were observed to be more encouraging of student expressiveness, use more positive display, more positive academic as well as behavioral evaluation, more buffered criticism and more positive relationship behaviors. However, these classroom differences favored identified high differential treatment classes at the first grade level and sometimes at the third grade level.

Differential treatment toward reading groups. The Bedrosian-Vernon dissertation (University of California, Berkeley 1983) demonstrated that the social-emotional environment of reading groups in four first grade classrooms in our study chosen to exemplify the extremes of high and low differential teacher treatment was more favorable for high ability reading groups than for low groups in all four classrooms. When student perceptions of differential treatment were compared to observed differential treatment (fall perception measures compared to a spring frequency count measure) agreement was evident in two of the four classrooms.

Student Outcomes

Own Expectations (concurrent)

Congruence between student and teacher expectations. Students' own expectations also show little relationship to teachers' expectations in

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the early grades in the fall of the school year but the relationship is greater at the fifth grade. Again, in the subsample of 12 classrooms, congruence of expectations is greater in perceived high differential treatment classrooms than in low differential treatment classrooms and only among fifth graders. That is, for the older students, in classrooms where cues about ability differences are evident, the agreement between students' expectations and teachers' expectations for them is accentuated.

Students own expectations. We asked whether children for whom teachers held high or low expectations carried differing expectations for themselves and whether these differences became more extreme as children got older or in classrooms where cues about ability were more prevalent. Our results demonstrate that across all grade levels, including children as young as first graders, high teacher expectancy students hold more positive expectations for themselves than do low teacher expectancy students in perceived high differential treatment classrooms but not in low differential treatment classrooms.

Achievement Outcomes (year end)

We asked whether the amount of differential gain in reading achievement between high and low teacher expectancy students was greater in classrooms identified by students as exhibiting a great deal of differential treatment than in classrooms with little differential treatment. Our results suggest no difference in overall achievement gain between these two types of classrooms. High teacher expectancy students gain more than low teacher expectancy students in both types of classrooms, although the means (particularly at the fifth grade level) are in the direction of a differential classroom effect. A second analysis conducted in the Brattesani dissertation (University of California, 1984), suggests that teachers' expectations for students do tend to predict more of the variance in year end achievement (beyond that of initial achievement differences) in perceived high differential teacher treatment classroom than in low differential treatment classrooms, again more prominent at the fifth grade level.

Mothers' Views as Outcomes

We examined how mothers' views of their children in the spring were related to teachers' expectations for their child in the fall and to the type of classroom that child was in (a perceived high or low differential treatment classroom).

We did not find confirmation of a differential effect of student-identified high versus low differential treatment classrooms reflected in mothers' ratings. Mothers of students for whom the teacher has high expectations in the fall, themselves rate their child's ability as higher, are more satisfied with their child's performance and expect their child to complete higher levels of education than do mothers of students for whom the teacher holds low expectations. However, mothers' views of their high teacher expectancy versus low teacher expectancy children were not more sharply differentiated in classrooms identified as high differential treatment classrooms.

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III. Individual Differences in Student Susceptibility

When we examine student effects as a function of "early in the school year" academic self-concept differences, we find that high and low self-concept students do not differ in their reporting of the extent of differential treatment perceived in the treatment of others. However, students with high self-concepts report that their own treatment from the teacher is more positive than do students with low self-concepts. High and low self-concept students were not found to be differentially reactive (in the achievement gains they achieved) to different levels of teacher expectations and/or to different types of classrooms (high and low differential treatment classrooms).

Brattesani's dissertation study (1984) on the combined third and fifth grade sample suggests a more complex effect of student self-concept differences. She found that students with moderate self-concept, not high or low, are most influenced by teacher expectations. Further, she found that when students received teacher expectations that were consistent with their own self-concept (high or low), students achieved at a higher or lower level than moderate teacher expectation control students. Her results suggest that it is the match of teacher and student views that is critical. Teacher feedback that is very inconsistent with a student's self-image may have less of an effect on achievement.

Summary

We have evidence to suggest that children as young as first graders are aware of differences in how teachers interact with high and low achievers in the classroom. In their own treatment as well, first grade high and low teachers expectancy students report differential treatment by the teacher. Yet, we can also see grade-level or developmental differences in the extent to which high and low teacher expectancy students differ in their perceptions of the positivity of their own interactions with the teacher. Older students see more differences in their own interactions with the teacher. Older students report more differential treatment toward others. Older students are more aware of specific teacher expectations for them. They can more accurately report the precise expectations relative to other students in the classroom.

Classrooms in which cues about ability differences among students are heightened (as identified by students) actually accentuate students' awareness of specific teacher expectations in the fall of the school year but only for older students . Classroom characteristics do heighten individual students' reports of differential treatment, in all three age groups. In the fall, classroom characteristics do not influence student perceptions of differences in their own treatment at any age level.

Classrooms identified by students as differing in the extent of differential teacher treatment observed were found to differ in the teacher's perceptions of student ability, perceptual differences that were not validated by entering achievement scores. High differential treatment teachers saw their students' ability in reading and math as

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more closely related (that is, students who were smart in reading would be smart in math) than did low differential treatment teachers, in the third and fifth grade sample. Despite these perceptual differences, on the part of teachers, a consistent set of quantitative classroom interactional characteristics which differentiated the identified classrooms at all grade levels did not emerge. However, student outcome differences in these two types of classrooms were identified. Concurrently with the identification of high and low differential treatment classrooms, students' expectations for themselves were different depending on classroom type. Students for whom the teacher held high versus low expectations showed more difference in their own expectations in classrooms where ability cues were accentuated than in classrooms where they were minimized, at all three grade levels. Thus, despite differences in first graders awareness of specific teachers' expectations, first graders own expectations for themselves are similarly affected. Further, as was shown in our previous studies, achievement outcomes are more related to teachers' expectations in classrooms with accentuated cues than in classrooms where cues are minimized.

Although these results highlight the power of classrooms in shaping children's perceptions and expectations, we also have some support for the notion that individual students differ in their perceptions of and reactivity to teachers' expectations. Student self-concept differences were evident in complex ways. It is the match of teacher and student views that proved most critical.

These findings have important implications for our understanding of which students are affected by teachers' expectations in the classroom. They underscore that even very young children are aware of differential treatment by the teacher in the classroom, an awareness which is accompanied by differences in the levels of childrens' expectations for themselves. These results also demonstrate how development and self-esteem of students play a role in children's perceptions of and reactions to teacher expectations.

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